

Long-Range Financial Plan and Solid Waste User Fee Study

**City and County of Honolulu
Department of Environmental Services
Refuse Division**

April 1999

R·W·BECK

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April 29, 1999

Mr. Frank J. Doyle, Chief
Department of Environmental Services, Refuse Division
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Doyle:

Subject: Long-Range Financial Plan and Solid Waste User Fee Study—Final Report

R. W. Beck, Inc., is pleased to submit this final report on the 1999 Long-Range Financial Plan and Solid Waste User Fee Study for the Department of Environmental Services, Refuse Division. This report sets forth and summarizes the methodology, assumptions, analyses, and final results of our study that was conducted for the Division between January and April 1999.

This financial planning and user fee study was a collaborative effort among ourselves and the Division staff. Ann Hajnosz, John Heberling, Ron Roche and I wish to express our appreciation for the friendly cooperation and assistance of all of those who provided the information and review necessary to successfully complete this study.

Once again, we appreciate the opportunity to be of service to City and County of Honolulu.

Sincerely,

R. W. BECK, INC.

A handwritten signature in black ink that reads 'Richard Cuthbert'. The signature is written in a cursive, flowing style.

Richard W. Cuthbert
Project Manager

City and County of Honolulu Long-Range Financial Plan and Solid Waste User Fee Study

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Section 1
INTRODUCTION

INTRODUCTION

PURPOSE

The Refuse Division (Division) of the Department of Environmental Services of the City and County of Honolulu (City) provides refuse collection and disposal services for most single-family residences and a limited number of multifamily properties and City agencies on the island of Oahu. Additionally, the Division contracts for the operation of a landfill and a waste-to-energy project (Honolulu Program of Waste Energy Recovery (H-POWER)) that together provide waste disposal for the Division's own waste stream as well as for most private collection contractors and other island disposal requirements.

The City is investigating the establishment of the Division as a self-supporting enterprise fund. As part of this investigation, the Division has retained R. W. Beck, Inc., to develop a long-range financial plan for the Division. A key element of this effort was the development of a financial planning model to assist the Division with its future planning efforts. A primary element of the financial planning model was the ability to estimate preliminary solid waste user fees that would provide sufficient revenues to meet a significant portion of operating and capital costs of the Division. These costs are currently funded through the City's general fund.

SCOPE OF SERVICES

Initially, the study consisted of two key tasks as follows:

1. Financial Plan Development
2. Preliminary User Fee Development

Included in both of these tasks was the development of a financial planning model that would be able to project costs, revenues and preliminary user fee requirements. During the course of the study, the first task was expanded as multiple alternative case scenarios were explored for the Division. Also, because of uncertainty in both specific user fee billing arrangements and in certain important solid waste usage data, the user fee development task was scaled back to an estimation of preliminary residential user fees for equivalent single-family residential households and for the limited number of multifamily and City agency sites served by the City. Commercial collections by the Division are already charged user fees and were explicitly excluded from the scope of this study.

OVERVIEW OF REPORT

This report provides a summary of the work conducted on the study to date. Section 1 summarizes the purpose of the study, the scope of services and includes this overview of the report. Section 2 provides a description of the financial planning model developed for the study and presents two alternative five-year financial plans for the Division. Section 3 presents the preliminary user fees that were derived from these two financial plans and discusses the advantages and disadvantages of implementing solid waste user fees. A general discussion of various issues and advantages and disadvantages of enterprise funds is provided in Appendix A. Finally, the analytical output for the financial planning and user fee model for the two scenarios is provided in Appendix B.

Section 2
FINANCIAL PLAN

INTRODUCTION

Utility systems operated by municipal governments are usually funded by either the general revenues of the governmental unit or, in the case of enterprise funds, by specific user fees for services rendered. Enterprise funds are established to account for operations that are financed and operated in a manner similar to private business enterprises. The intent of enterprise funds is that the user fees or charges for services provided to the general public are established at a level that will recover all or a portion of the costs incurred by the governmental entity in providing such services.

A significant advantage to enterprise fund operation, as opposed to general revenue funding, is the increased need and subsequent ability to identify and record all costs associated with providing public services. A related disadvantage is the need for greater attention to accounting of operational revenues and expenses, as well as the requirement to establish appropriate rates or user fees. A more detailed description of enterprise funds and their advantages and disadvantages is provided in Appendix A attached to this report.

The financial planning model developed for the Division is based on the premise that the Division's operation will be modified so it will be accounted for as an enterprise fund operation. To this end the Division's direct and indirect costs have been identified by the Division and projected into the future on an annual basis. These costs in total represent the Division's revenue requirements which are presumed to be funded through a combination of existing revenue sources and newly implemented user fees. In the near term a certain portion of the revenue requirement is expected to be funded through direct contributions from the City's general fund. Potential contributions or subsidies from the City are not reflected in the financial planning model at the present time.

FINANCIAL PLANNING MODEL

A financial planning model was developed to project the various revenue sources and expenses of the Division on an annual basis for each of the five fiscal years, 2000 through 2004. A significant effort was undertaken with Division staff to identify what revenue sources and expenses would be incurred by the Division as a self-supporting, enterprise operation. All of the basic data used in the model and the two cases presented in this report were provided to us by the Division and have not been independently determined or verified.

REVENUES

Currently, annual revenues of the Division are primarily disposal fees assessed at transfer stations, the Waimanolo Gulch landfill and at the H-POWER waste-to-energy facility. Estimated revenues from the sale of electric energy generated at H-POWER and revenues from the recycling surcharge are also included. Without user fees, the Division's revenue requirement would need to be funded through the City's general fund, which in turn is funded primarily with property tax revenues.

A primary objective of the model was to determine the annual revenue required to be derived from user fees for the collection services being provided by the Division to its customers so that when combined with the Division's other revenue sources, total revenues will be sufficient to pay all the Division's operating expenses, debt service, and payment obligations to other City agencies. Aside from user fees, the other sources of revenue to the Division estimated to be provided by the existing revenue sources are summarized in Table 2-1. Accompanying rates and dollar amounts shown are estimates for fiscal year 1999.

**Table 2-1
EXISTING DIVISION REVENUE SOURCES
FISCAL YEAR 1999**

Small Business Collections	\$850,000 per year
Commercial Disposal Charges	Charges for waste disposal at transfer stations at \$92.25/ton and at the Waimanalo Gulch Landfill at \$65.75/ton
H-POWER Disposal Fees	\$34.00/ton-City and \$65.75/ton-Commercial
H-POWER Electric Sales	\$27,000,000 per year
H-POWER Lease	Pursuant to terms of agreement, \$21,056,377 in 1999
Methane Recovery	\$84,000 per year
Sale of Recycled Material	\$31,000 per year
Sale of Other Material	\$24,000 per year beginning in FY 2000
Recycling Surcharge	6% of disposal fee at the landfill, H-POWER and transfer stations
State Glass Appropriation	\$1,475,000 per year

Rates shown in the previous table are assumed to increase 6% per year. For the purpose of this analysis, the estimated current and projected amounts of these revenues were provided by the Division.

OPERATING EXPENSES

Annual operating expenses projected in the model were developed by the Division's staff and include budgeted direct salary costs, fringe benefits and current expenses for collection, disposal and recycling operations of the Division. Operating expenses also include administrative costs and the costs of investigation and inspection.

Similar to revenue sources, operating expenses that would be incurred by the Division as an enterprise operation were identified and projected on an annual basis. Projected amounts for fiscal year 2000 were provided to us by the Division and correspond to the Division's budgeted costs. The primary categories of operating expenses and budgeted amounts for fiscal year 2000 are summarized in Table 2-2. See Table 2 in Appendix B for further detail of operating expenses.

**Table 2-2
BUDGETED OPERATING EXPENSES
FISCAL YEAR 2000**

Administration	\$1,244,089
Investigation and Inspection	\$253,156
Recycling	\$2,403,927
Glass Recycling	\$1,962,136
Refuse Collection	\$15,623,972 without expansion of automated collection, \$13,181,646 with expansion of automated collection
Maintenance and Waste Diversion	\$1,243,397
Landfill	\$6,229,132
Transfer Stations	\$5,777,897
H-POWER	\$98,747,809

In addition, the Division is expected to make payments to the City for the use of other City services that are provided to the Division in support of its operation. These types of services, which include such items as automotive services, billing and collection, Central Administration Services Expense (CASE), legal counsel, GIS support, building rent and other services, are typically budgeted through other departments of the City. The allocation of the cost for these services to the Division was estimated and provided by the Division. The cost items and estimated amounts for fiscal year 2000 are shown in Table 2-3 as follows:

**Table 2-3
ESTIMATED DIVISION PAYMENTS TO
OTHER CITY AGENCIES
FISCAL YEAR 2000**

CASE	\$3,444,260
Automotive Services Division	4,000,000
Road Maintenance Division	180,000
Building Rental	309,000
Billing & Collection	515,000
Corporation Counsel	50,000
GIS Support	103,000
Driver Training	40,000
Department Administrative	50,000
Information Technology	40,000
Fiscal Office Services	100,000

CAPITAL EXPENDITURES

The Division has prepared a capital expenditure budget for renewals, replacements and additions of capital equipment and facilities. This capital budget is approximately \$10.5 million in fiscal year 1999, \$16.1 million in fiscal year 2000 and \$8.1 million in fiscal year 2001. Of these budgeted amounts, \$3.9 million is for automated collection equipment in each of the fiscal years 1999 and 2000. An additional \$5.1 million and \$2.1 million in fiscal years 2000 and 2001, respectively, are included for other collection equipment. For more detail on budgeted capital expenditures, see Table 5 in Appendix B.

Estimated capital expenditures of the Division are assumed to be funded through the issuance of tax-exempt bonds or other loans. As an independent utility enterprise fund, interest and principal payments associated with bonds and loans would be an obligation of the Division. The capital expenditures, alternatively, could be funded with annual revenues or reserve funds; however, the Division has indicated that bond proceeds are the expected source of funds for capital improvements. The Division also has assumed that there will be no obligation for the Division to pay capital recovery charges for the existing facilities and equipment presently owned by the City and which are assumed would be turned over to the Division.

RESERVE FUNDS

The Division estimates that at the end of fiscal year 1999, there will be approximately \$90.9 million in the H-POWER capital reserve fund. For the purpose of the financial plan, this fund is projected to remain intact throughout the projection period. Interest is assumed to be earned on the fund balance, and the interest earnings are assumed to be applied towards the operating expenses of the Division. In addition to the H-POWER fund, the Division estimates that it will have approximately \$3.9 million in its glass incentive fund and \$3.1 million in its recycling fund at the end of fiscal year 1999.

PROJECTED NUMBER OF CUSTOMERS AND WASTE QUANTITIES

The planning model contains a projection of the number of customers to be served by the Division based on assumed annual growth in the estimated number of existing services. The Division has indicated that presently it serves approximately 56,700 single-family households in the Honolulu district and approximately 93,500 single-family households in the rural districts.

Of the total 150,200 single-family households for which collection services are provided, 72,300 are served with automated collection equipment and 61,200 are pending conversion from manual to automated collection. The Division's long-range plan is to convert the remaining households to semi-automated collection. For the purpose of the analysis, it is assumed that the conversion to automated collection will occur over the next five years so that by fiscal year 2004 all of these customers will have automated collection service. Overall, the total number of single-family households for which collection service is provided is projected to increase at 0.33% per year.

The total quantity of waste collections and disposal has been estimated by the City to increase at 1% per year from present quantities. Presently, the Division indicates that 30,000 tons are collected at convenience centers and 298,150 tons are collected from customers served directly by the Division. In addition, 226,300 tons are disposed of at transfer stations, 219,300 tons are disposed of at the Waimanalo Gulch landfill and 641,900 tons are disposed of at the H-POWER facility. See Table 3 of Appendix B for further detail on the number of customers served by the Division and waste quantities.

FORMAT OF FINANCIAL MODEL

Results of two separate cases derived from the financial planning model are included as Appendix B to this report. The model's output consists of five tables described with their primary functions as follows:

Table 1 – Actual and Projected Operating Statement

Calculates net revenue requirements, net operating revenues, interest earnings on fund balances, annual capital recovery expenses, net surplus revenues, average user fee per equivalent single-family household and fund balances.

Table 2 – Actual and Projected Operating Expenses

Shows actual operating expenses by category and projects operating expenses in future years based on current budgeted costs and assumed escalation in these costs. Cost categories are further classified as salaries, fringe benefits, and current expenses.

Table 3 – Projected Number of Customers and Waste Quantities

Calculates the number of customers served by classification (i.e., single-family residences, multifamily properties and non-profit/parks) and waste collection and disposal quantities, based on applying an assumed growth rate to current customer counts and waste quantities.

Table 4 – Projected Billable Waste Quantities and Tipping Revenues

Shows estimated percentage of waste quantities deposited at transfer stations, convenience centers, the Division's landfill and the H-POWER facility for which fees are collected. Shows estimated billing rates and calculates the projected revenues to be received by the Division for waste disposal at these facilities.

Table 5 – Projected Capital Improvement Expenditures, Sources of Funds and Capital Recovery Expense

Shows budgeted capital improvement expenditures for equipment and facilities and the projected sources of funds for these expenditures (i.e., mid-term debt, long-term debt, and current revenues) on an annual basis through fiscal year 2004.

ASSUMPTIONS

The financial planning model incorporates a large number of basic data items and assumptions provided by the Division. Principal among these are the following:

1. General inflation is assumed to be 3.0% per year.
2. Mid-term debt is defined as debt issued with a repayment period of 7 years and an annual interest rate of 6.0%.
3. Long-term debt is defined as tax-exempt debt issued with a repayment period of 20 years and an annual interest rate of 5.5%.
4. Financing expenses associated with bond issuance are assumed to be 1.65% of the total bond amount issued.
5. Interest is earned on funds held in reserve at an annual rate of 5.0%.

6. Equipment replacements and additions are assumed to be funded with the issuance of mid-term debt (7-year repayment period).
7. Facility replacements and additions are assumed to be funded with the issuance of long-term debt (20-year repayment period).
8. No capital recovery expense will be assessed on the Division for existing assets of the City assigned to the Division.
9. Operating expenses included in the model are based on budgeted expenses for fiscal years 1999, 2000 and 2001. Thereafter, operating expenses are escalated at a rate of 3.0% per year.
10. Fringe benefits are assigned to labor costs at 37% of the estimated salary cost.
11. CASE paid by the Division to the City is assumed to equal 2.5% of projected operating revenues.
12. The net annual customer growth rate is 0.33% for single-family residences, 0.53% for multifamily services and 1.0% for city agency customers. Further, the total waste stream collected and disposed of by the Division will increase at 1.0% per year.
13. Annual tipping fees (rates charged for disposal at the landfill and H-POWER facility) will increase 6.0% per year.
14. Over the next five years, all customers currently identified as Automated-Pending (19,465 and 41,702 at current levels for Honolulu and Rural, respectively), (i) in Case 1 will continue with their existing collection service and (ii) in Case 2 will be switched to automated collection over the five-year period.

ALTERNATIVE FINANCIAL PLAN SCENARIOS

Two scenarios were defined by the Division for the financial planning analysis as follows:

Case 1 – Preliminary Base (No Expansion of Automated Collection Routes)

Case 2 – Automated Collection Expansion

The only financial difference between these two cases is in the estimated cost of collections. For Case 1, the total cost of collections is estimated to be \$15,623,972 in fiscal year 2000. For Case 2 with expanded automated collection, the total cost of collections is estimated to be \$13,181,646 in the same year. No additional capital costs have been included for the Automated Collection Expansion scenario.

Detailed results of the financial plans for the two cases are shown in Appendix B. The results for fiscal year 2000 are summarized as follows:

**Table 2-4
SUMMARY OF ESTIMATED OPERATING PROJECTIONS
FISCAL YEAR 2000**

	Case 1 – No Expansion of Automated Collection Routes	Case 2 – Automated Collection Expansion
New Residential User Fees	\$40,838,605	\$38,333,649
Other Revenues	\$96,931,600	\$96,931,600
Total Revenues	\$137,770,205	\$135,265,249
Total Operating Expenses	(\$133,485,515)	(\$131,043,189)
Net Operating Revenues	\$4,284,690	\$4,222,060
Other Income (Interest Earnings)	\$4,546,570	\$4,546,570
Debt Service	0	0
Payments to Other City Agencies	\$8,831,260	\$8,768,630
Net Surplus Revenues	0	0

It is important to note that no debt service is shown as a cost obligation in the above amounts. This is due to the assumption that the first debt issuance the City would incur on Division-related capital expenditures would not occur until June 30, 2000. Payments of debt service would begin in fiscal year 2001. The estimated annual debt service obligation of the Division in fiscal year 2001 is \$2,301,000 assuming level debt service payments.

The above results also indicate that there are no net surplus revenues projected in fiscal year 2000. For the purposes of the financial planning model, the residential user fee revenue is set so that when combined with other revenues, the total revenues of the Division are equal to the total cost obligation. This assumption is held the same through the five-year projection period.

Section 3

ESTIMATION OF PRELIMINARY USER FEES

ESTIMATION OF PRELIMINARY USER FEES

INTRODUCTION

As previously indicated, one of the objectives of the financial planning model is to estimate the total annual revenue requirement of the Division. The total revenue requirement is then reduced by various revenue sources available to support the Division, including the H-POWER revenues, landfill disposal revenues and other revenues in order to determine the total revenues needed to be collected from customers for collection services. The Division would then establish user fees or rates for collection services that would provide the necessary revenues and that would be reasonably easy for customers to understand.

Normally from the perspective of a solid waste utility, the user fees are established in a schedule of periodic (e.g., monthly, quarterly, etc.) charges, for a certain number of weekly collection pickups and for a certain waste container size, e.g., a 96-gallon unit. Although the market value of the service must be considered in establishing user fees, it is necessary to set the unit charges at an appropriate level to recover the necessary revenue amounts. Also, it is important to have a good understanding of the number of customers to be served and the level of service (pickups per week) being provided to appropriately establish user fees.

PRELIMINARY USER FEES

Preliminary estimates of required user fees have been developed under the two scenarios discussed in Section 2. In total, revenues from required user fees are estimated to total \$40,838,605 for fiscal year 2000 for Case 1 and \$38,333,649 for the same year for Case 2.

User fees were calculated for three classifications of services:

- Single-family residential (both automated and manual collection).
- Multifamily or City agency collection (automated or manual collection).
- Multifamily or City agency collection (3-yard container collection).

It was assumed that each multifamily household unit would have two-thirds the waste generation and disposal of a typical single-family residential unit and that the user fee per unit would be correspondingly reduced. Further, user fees for 3-yard container units for both multifamily and City agency collection are based on the assumption that the collection costs per 3-yard container unit would be equivalent to the cost of four single-family, 96-gallon container units. This assumption was provided to us by the Division and corresponds reasonably well with a recent study conducted by R. W. Beck in which the relationship of

4.27 single-family equivalent 90-gallon container units per 3-yard multifamily container units was established.

Results of the preliminary user fee analysis are as follows:

**Table 3-1
PRELIMINARY ESTIMATES OF
MONTHLY USER FEES PER UNIT OF SERVICE
CHARGED FOR TWO PICK-UPS PER WEEK**

Class	Unit of Service	Case 1	Case 2
Single-family	96-gallon units or manual	\$19.80	\$18.59
Multifamily	Manual collection per unit	\$13.20	\$12.39
Multifamily/Public	3-yard container unit	\$79.20	\$74.36

It is anticipated that these preliminary estimates will be finalized after a decision is made on the method of billing to be used and a more accurate estimate of billing units can be derived. After the customer billing process is established, we would recommend that a detailed cost-of-service analysis be conducted to better estimate the cost of providing collection services in order to set more equitable user fees. It will be necessary at that time for the City to establish rate setting policies that provide for a phase-in of full cost-of-service rates.

ADVANTAGES AND DISADVANTAGES OF SOLID WASTE USER FEES

With an enterprise fund operation, the revenues to be recovered through user fees can be determined in a straightforward manner as previously described. If the costs of the operation are understood and controlled and the units of service can be quantified with reasonable assurance, user fees can be established to achieve net revenue requirements. The public generally accepts the concept of fees charged to pay for the costs of service.

Nevertheless, user fees are not easy to implement, particularly if the services have been paid for through general fund contributions in the past. Implementation of new user fees brings the issues of service cost, service quality, government involvement and taxes to the public's attention. New user fees are often viewed as another form of taxation regardless of the value of the service being provided. With the added attention to the issue, however, there is an accompanying opportunity for educating the public on the issues and for developing user fees that send price signals to help direct demand for the service in a manner that is beneficial to the community as a whole.

Some identified advantages of the Division's implementation of solid waste user fees include the following:

- User fees give customers price signals: Solid waste collection is not free.
- User fees provide an alternative revenue source, especially if the City is assessment-revenue constrained.
- User fees provide a more equitable funding: User fees are based on service level, not property value.
- User fees can transition over time to a volume-based rate, promoting customer decision-making which is more market-based.
- Under the City's current operations, multifamily and commercial entities are paying twice for solid waste collection (bundled into their property taxes and to the private collection services that actually collect their waste). User fees for single-family residential accounts are a more equitable means of revenue collection.

Identified disadvantages of implemented user fees include the following:

- User fees require potentially high administrative and billing costs.
- User fees could be perceived as a new tax by residents.
- Fixed user fees (similar to the monthly charges proposed in Section 2) provide little incentive for waste reduction and are less equitable than volume-based user charges (i.e. charges that are reflective of the quantity of waste collected).

Appendix A
OPERATION OF THE DIVISION
AS A SELF-SUPPORTING ENTERPRISE FUND

OPERATION OF THE DIVISION AS A SELF-SUPPORTING ENTERPRISE FUND

INTRODUCTION

This appendix includes a discussion of enterprise funds and their inherent advantages and disadvantages. As indicated in the body of this report, the basic premise for the financial plan established for the Division is that the City would establish the Division as an enterprise operation. As a result, the costs and revenues of the Division would be accounted for as a business operation separate from other operations of the City.

ENTERPRISE FUNDS

Because of the diverse nature of governmental operations and the necessity of a governmental unit to capture and account for revenues and expenses attributable to a number of diverse operations, several types of fund structures are typically used. These include governmental funds and proprietary funds. Generally, the governmental fund types are supported by general revenue of the governmental unit (taxes, federal and state endowments, etc.) while proprietary funds, such as enterprise and internal service funds, are supported by specific user fees for services rendered.

Enterprise funds are established to account for operations that are financed and operated in a manner similar to private business enterprises. The intent of enterprise funds is that the cost of providing goods or services to the general public on a continuing basis is financed or recovered primarily through direct user fees or charges.

The nature of most enterprise operations is such that demand for the provided services will largely establish the appropriate level of revenues and expenses. It is normally on this basis that annual budgets are developed. The accounting and account classifications for enterprise fund revenues and expenses should be classified in essentially the same manner as those of similar business organizations, functions or activities.

ADVANTAGES AND DISADVANTAGES OF ENTERPRISE FUNDS

There are advantages and disadvantages of establishing the Division as an enterprise operation. Many of the disadvantages arise from newly established policies regarding payment, or the establishment of user fees, for services or materials which were not charged or incurred while being part of a general fund.

OPERATION OF THE DIVISION AS A SELF-SUPPORTING ENTERPRISE FUND

The accounting for a governmental enterprise fund operation is similar to private enterprise with the exception of accounting for profit and taxes. A significant accounting charge for a newly classified governmental enterprise is the necessity to keep track of depreciation, amortization and bad debt. This is especially important when the enterprise includes a landfill operation. The accounting for the liability associated with closure and long-term care of the landfill is often of great concern both because of the dollar amount and the impact on retained earnings.

The accounting method used for governmental enterprise funds is typically full or modified accrual. The enterprise is usually maintained on a modified accrual basis until year-end, at which time it is converted to full accrual. The majority of billable revenues are recorded when earned against accounts receivable, with the remainder of revenues, interest, miscellaneous revenue, etc. accounted for when received. Expenses are generally recorded when paid rather than when incurred. However, at the end of the year, all revenues and expenses are converted to full accrual and the appropriate receivables and payables are recorded.

The relationship of the annual budget to the accounting system for an enterprise fund can be onerous if not properly established. If the budget is treated on a cash basis, as well as receipts and disbursements, the budget can be treated almost like a checkbook. The cash is recorded (deposited) when received and the disbursements recorded when cash is paid out (checks written). Since governmental enterprise operations are supposed to be self-sufficient based on the definition of an enterprise fund, care should be taken not to over expend the fund's cash position. Being part of a general fund allows an operation to over extend, whereas, as an enterprise, the cash position is the governing focus.

There are many reasons why governments convert their revenue-supported operations from a general fund basis to an enterprise fund. Generally this is done to relieve the ad valorem burden of supplementing the enterprise operation, the necessity to release other available funds for debt support, political pressure or in response to a third-party recommendation. Some states have required that certain types of operations be accounted for as enterprise funds. When provided by a municipal government or other public entity, water and sewer operations, electric utility service, and solid waste collection and disposal are examples of typical operations which are required to be accounted for as enterprise funds. One important reason for this requirement is the necessity to demonstrate full cost for disclosure and rate setting purposes. Many advantages and some disadvantages related to converting from a general fund to an enterprise fund are summarized below.

ADVANTAGES

- Rate setting is simplified because of the identification of all costs.
- If rates or user fees are set without supplement from the general fund and prior and other governmental expenses are charged to the enterprise fund, the general fund may be provided with release of previously restricted revenues.
- Debt financing for the enterprise fund is based on the revenue stream of the enterprise (revenue bonds) rather than on legally available funds of the jurisdiction (general obligation bonds).
- The borrowing capacity of the general fund may increase.
- The rating on revenue bond financing can be enhanced based on the security of the revenue stream. Some solid waste enterprise operations have implemented annual solid waste special assessment programs both to provide added security for bonding and for the purpose of managed flow control. An example of such a program is the use of a special assessment, usually placed on the annual property tax bill, to pay for a specific purpose, e.g. to finance a new solid waste shredding facility as a means of reducing landfill volumes. The financial community has viewed special assessment programs as a highly desirable means of revenue assurance that is necessary to support debt. The programs are versatile in that a jurisdiction can assess all or only a portion of solid waste management cost, depending on its objectives.
- The rating on future general obligation debt may be enhanced because of the release of liabilities associated with the enterprise fund operations.
- Equipment short-term financing, via a local bank or lease purchase, is available, but may be restricted to the enterprise fund's ability to support additional debt.
- There is an increased ability to identify and record all costs related to the operation.
- Budgeting is simplified because all costs and cost experience have been recorded.
- Efficiency of operations is more identifiable and measurable.
- With the conversion to an enterprise fund, the general fund tax rate may be able to be reduced or, if not reduced, monies redirected.
- With implementation of user fees, users of the enterprise fund services are provided an indication for what these services cost.

DISADVANTAGES

- Greater attention to accounting for operational revenues and expenses is required.
- Rates or user fees may be required to be set to cover all costs without supplement from other funding sources.
- Identification and measurement of efficiencies may be required.
- Cash balances require monitoring.
- A mechanism for identifying and charging indirect cost should be established.
- Initial cost (rates) may increase sporadically due to late identification of hidden costs.
- If user fees are implemented, a billing and tracking system must be established and maintained, increasing the cost of providing services.
- Billing for service may be viewed as an indirect increase in taxes.
- The rate charged for service may not equate to the rate previously paid based on assessed value (ad valorem tax).

Appendix B
FINANCIAL PLANNING MODEL OUTPUT

FINANCIAL PLANNING MODEL OUTPUT

As indicated in Section 2 of this report, two primary scenarios were developed in this study as follows:

Case 1 – Preliminary Base (No Expansion of Automated Collection Routes)

Case 2 – Automated Collection Expansion

During the developmental stages of the model, both cases were run through several iterations accommodating a number of adjustments to input data, assumed variables and computations. The two model scenario outputs included in this appendix are identified as Case 1.9 and Case 2.4 which correspond to Case 1 and Case 2, as described above, respectively.

**CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division**

**Projected Operating Results
Assumptions and General Parameters**

Case 1.9: PRELIMINARY BASE (No Expansion of Automated Collection Routes)

Refuse Division modeled as enterprise fund
 Division pays no capital recovery expense for existing system
 Future capital expenditures funded from debt
 Operating reserves assumed to be provided by existing H-POWER cash balances

Assumptions

General Inflation	3.00%
General Salary Escalator	3.00%
General Expense Escalator	3.00%

Mid-Term Debt (Equipment)	
Interest Rate	6.00%
Repayment Period (Years)	7

Long-Term Debt (Facilities)	
Interest Rate	5.50%
Repayment Period (Years)	20

Minimum Debt Service Cover	1.00
Bond Financing Expense	1.65%
Interest Earnings Rate	5.00%

CASE (% of Revenues)	2.50%
Fringe Benefits on Labor	37.00%

Customer Growth Rate	
Single-Family Household	1.00%
Multifamily	1.00%
Non-Profits/Parks	1.00%
Waste Stream Growth	1.00%
Recyclable Material Growth	0.00%

Equivalent Single-Family Units (# of SFH/ unit)	
Multifamily Manual	0.67
Multifamily 3-yr	4.00
Non-Profit/Parks 3-yr	4.00

Annual Tipping Fee Increase	6.00%
-----------------------------	-------

Min. Annual Rev. Surplus (\$000)	\$ -
Max. Operating Reserve (\$000)	\$ 6,000

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

	Actual				Projected			
	1997	1998	1999	2000	2001	2002	2003	2004
1 REVENUES								
2 New Residential User Fees	\$ -	\$ -	\$ -	\$ 40,838,605	\$ 42,805,024	\$ 44,909,859	\$ 46,170,261	\$ 47,290,542
3 Small Business Collection	527,627	856,854	850,000	850,000	850,000	850,000	850,000	850,000
4 Commercial Disposal	10,820,607	10,590,564	5,290,000	7,330,000	7,920,000	8,490,000	9,200,000	9,860,000
5 H-POWER Disposal Fees	27,004,753	30,722,092	30,900,000	35,880,000	38,120,000	40,140,000	42,610,000	45,170,000
6 H-POWER Elec. Sales (Gross)	19,737,971	28,148,134	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000
7 H-POWER Lease	24,091,343	21,661,333	21,056,377	20,942,600	25,218,320	24,306,510	23,926,340	23,320,860
8 Methane Recovery	56,459	119,900	84,000	80,000	80,000	70,000	70,000	70,000
9 Sale of Recycled Material	32,618	27,951	31,000	20,000	24,000	24,000	26,000	26,000
10 Sale of Other Material	18,250	11,684	3,180	24,000	24,000	24,000	24,000	24,000
11 Recycling Surcharge	2,542,853	2,863,123	3,030,000	3,330,000	3,550,000	3,770,000	4,010,000	4,260,000
11a State Glass Appropriation	1,875,000	1,875,000	1,475,000	1,475,000	1,475,000	1,475,000	1,475,000	1,475,000
12 Other	-	-	-	-	-	-	-	-
13 TOTAL REVENUES	\$ 86,707,481	\$ 96,876,635	\$ 89,719,557	\$ 137,770,205	\$ 147,066,344	\$ 151,059,369	\$ 155,361,601	\$ 159,346,402
14 OPERATING EXPENSES (Excluding Equipment)								
15 Administration	\$ 957,473	\$ 1,002,107	\$ 960,465	\$ 1,244,089	\$ 1,071,024	\$ 1,103,157	\$ 1,136,251	\$ 1,170,339
16 Investigation & Inspection	243,914	264,823	263,003	253,156	260,753	268,575	276,639	284,946
17 Recycling	1,049,275	1,116,044	1,683,629	2,403,927	2,476,042	2,550,330	2,626,830	2,705,639
18 Glass Recycling	1,417,218	1,360,172	1,941,215	1,962,136	2,021,002	2,081,633	2,144,086	2,208,409
19 Refuse Collection								
20 Honolulu	7,028,483	7,446,447	5,978,191	7,732,269	7,964,239	8,203,169	8,449,265	8,702,752
21 Rural	8,127,905	8,020,641	6,081,094	7,891,703	8,128,463	8,372,317	8,623,481	8,882,182
22 Subtotal - Collection	15,156,388	15,467,088	12,059,285	15,623,972	16,092,702	16,575,486	17,072,746	17,584,934
23 Refuse Disposal								
24 Maint. & Waste Diversion	1,179,373	1,277,131	1,158,385	1,243,397	1,280,696	1,319,114	1,358,688	1,399,441
25 Landfill	6,869,440	5,884,984	9,467,368	6,229,132	5,212,447	5,368,829	5,529,877	5,695,782
26 Transfer	5,274,066	5,422,822	5,576,570	5,777,897	5,951,233	6,129,765	6,313,663	6,503,075
27 H-POWER	89,990,585	93,047,515	98,132,362	98,747,809	105,720,655	107,175,570	108,671,851	110,208,747
28 Subtotal - Refuse Disp.	103,313,464	105,632,452	114,334,685	111,998,235	118,165,031	119,993,278	121,874,079	123,807,045
29 TOTAL OP. EXPENSES	\$ 122,137,732	\$ 124,842,686	\$ 131,242,282	\$ 133,485,515	\$ 140,086,554	\$ 142,572,459	\$ 145,130,631	\$ 147,761,312
30								
31 NET OP. REVENUES	\$ (35,430,251)	\$ (27,966,051)	\$ (41,522,725)	\$ 4,284,690	\$ 6,979,790	\$ 8,486,910	\$ 10,230,970	\$ 11,585,090

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)	Actual			Projected					
	Fiscal Year	1997	1998	1999	2000	2001	2002	2003	2004
32	NET OP. REVENUES	\$ (35,430,251)	\$ (27,966,051)	\$ (41,522,725)	\$ 4,284,690	\$ 6,979,790	\$ 8,486,910	\$ 10,230,970	\$ 11,585,090
33									
34	OTHER INCOME								
35	Interest Earnings - H-POWER	7,869,544	8,246,908		4,546,570	4,546,570	4,546,570	4,546,570	4,546,570
36	Interest Earnings - Other								
37	AMOUNT AVAIL. FOR DEBT SERVICE & OTHER PURPOSES			\$ (41,522,725)	\$ 8,831,260	\$ 11,526,360	\$ 13,033,480	\$ 14,777,540	\$ 16,131,660
38									
39	PROVISION FOR CAPITAL RECOVERY								
40	Existing System								
41	Equipment	3,938,891							
42	Facilities	5,103,599							
43	Subtotal	\$ 9,042,490	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	Debt Service on New Debt					2,301,000	3,542,000	5,007,000	6,085,000
45	Subtotal - Cap. Rec.	\$ 9,042,490	\$ -	\$ -	\$ -	\$ 2,301,000	\$ 3,542,000	\$ 5,007,000	\$ 6,085,000
46									
47	PAYMENTS TO OTHER CITY AGENCIES								
48	CASE	\$ -	\$ -	\$ -	\$ 3,444,260	\$ 3,676,660	\$ 3,776,480	\$ 3,884,040	\$ 3,983,660
49	Automotive Services				4,000,000	4,120,000	4,243,600	4,370,900	4,502,000
50	Road Division				180,000	185,400	191,000	196,700	202,600
51	Building Rental				309,000	318,300	327,800	337,600	347,700
52	Billing & Collection				515,000	530,500	546,400	562,800	579,700
53	Corporation Counsel				50,000	51,500	53,000	54,600	56,200
54	GIS Support				103,000	106,100	109,300	112,600	116,000
55	Driver Training				40,000	41,200	42,400	43,700	45,000
56	Department Administrative				50,000	51,500	53,000	54,600	56,200
57	Information Technology				40,000	41,200	42,400	43,700	45,000
58	Fiscal Office Services				100,000	103,000	106,100	109,300	112,600
59	Subtotal	\$ -	\$ -	\$ -	\$ 8,831,260	\$ 9,225,360	\$ 9,491,480	\$ 9,770,540	\$ 10,046,660
60									
61	Less: Current Capital Exp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62	Less: Other Uses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
63	NET SURPLUS REVENUES	\$ (41,522,725)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

	Actual			Projected					
	Fiscal Year	1997	1998	1999	2000	2001	2002	2003	2004
64									
65	NUMBER OF EQUIVALENT SINGLE-FAMILY HOUSEHOLDS								
66	Single-Family Households			155,840	156,360	156,880	157,410	157,940	158,470
67	Multifamily (SFH Equivalent)			14,407	14,507	14,608	14,708	14,808	14,909
68	Non-Profit/Parks (SFH Equivalent)			984	992	1,000	1,012	1,024	1,036
69	Total Equivalent Single-Family Households			171,231	171,859	172,488	173,130	173,772	174,415
70									
71	AVERAGE USER FEE PER S.F. HOUSEHOLD (\$/Month)			\$ -	\$ 19.80	\$ 20.68	\$ 21.62	\$ 22.14	\$ 22.59
72	Percent Change from Prior Year			0.0%	4.4%	4.5%	2.4%	2.0%	
73									
74	OPERATING RESERVE FUND								
75	Balance - Beg of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
76	Deposits to Fund			-	-	-	-	-	-
77	Withdrawals from Fund			-	-	-	-	-	-
78	Balance - End of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
79	H-POWER CAPITAL RESERVE								
80	Balance - Beg of Year			\$ 116,813,005	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356
81	Deposits to Fund			88,306,432	-	-	-	-	-
82	Withdrawals from Fund			114,188,081	-	-	-	-	-
83	Balance - End of Year			\$ 90,931,356	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356	\$ 90,931,356
84	GLASS INCENTIVE FUND								
85	Balance - Beg of Year			\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434
86	Deposits (Withdrawals)			-	-	-	-	-	-
87	Balance - End of Year			\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434
88	RECYCLING FUND								
89	Balance - Beg of Year			\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675
90	Deposits (Withdrawals)			-	-	-	-	-	-
91	Balance - End of Year			\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675	\$ 3,099,675
92									
93	OUTSTANDING DEBT (Year End)			\$ -	\$ 16,367,000	\$ 24,646,000	\$ 34,179,000	\$ 41,549,000	\$ 48,225,000
94	DEBT SERVICE COVERAGE			-	-	5.01	3.68	2.95	2.65

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual			Projected				Assumed Annual Growth	Calculated Annual Growth	
	1997	1998	1999	2000	2001	2002	2003			2004
Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)										
1 ADMINISTRATION										
2 Salaries	\$ 654,975	\$ 685,579	\$ 647,244	\$ 652,698	\$ 672,280	\$ 692,450	\$ 713,220	\$ 734,620	3.00%	2.56%
3 Fringe Benefits	242,341	253,664	239,480	241,498	248,744	256,207	263,891	271,809	3.00%	2.56%
4 Current Expenses	50,899	60,136	73,741	349,893	150,000	154,500	159,140	163,910	3.00%	17.32%
5 Equipment	9,258	2,728	-	-	2,000	2,060	2,120	2,180	3.00%	-
6 Subtotal - Administration	\$ 957,473	\$ 1,002,107	\$ 960,465	\$ 1,244,089	\$ 1,073,024	\$ 1,105,217	\$ 1,138,371	\$ 1,172,519		
7 INVESTIGATION & INSPECTION										
8 Salaries	\$ 171,496	\$ 188,866	\$ 184,944	\$ 177,756	\$ 183,090	\$ 188,580	\$ 194,240	\$ 200,070	3.00%	1.58%
9 Fringe Benefits	63,454	69,880	68,429	65,770	67,743	69,775	71,869	74,026	3.00%	1.58%
10 Current Expenses	8,964	6,077	9,630	9,630	9,920	10,220	10,530	10,850	3.00%	2.41%
11 Equipment	-	-	-	-	6,500	-	-	-	3.00%	-
12 Subtotal - Invest. & Insp.	\$ 243,914	\$ 264,823	\$ 263,003	\$ 253,156	\$ 267,253	\$ 268,575	\$ 276,639	\$ 284,946		
13 RECYCLING										
14 Salaries	\$ 153,514	\$ 127,721	\$ 145,824	\$ 159,728	\$ 164,520	\$ 169,460	\$ 174,540	\$ 179,780	3.00%	4.28%
15 Fringe Benefits	56,800	47,257	53,955	59,099	60,872	62,700	64,580	66,519	3.00%	4.28%
16 Current Expenses										
17 Contractual Svcs	731,319	815,892	1,352,500	2,010,000	2,070,300	2,132,410	2,196,380	2,262,270	3.00%	10.84%
18 Other Current	106,806	125,174	131,350	175,100	180,350	185,760	191,330	197,070	3.00%	8.45%
19 Subtotal - Current Exp.	\$ 838,125	\$ 941,066	\$ 1,483,850	\$ 2,185,100	\$ 2,250,650	\$ 2,318,170	\$ 2,387,710	\$ 2,459,340		
20 Equipment	836	-	-	-	-	350,000	-	-	3.00%	-
21 Subtotal - Recycling	\$ 1,049,275	\$ 1,116,044	\$ 1,683,629	\$ 2,403,927	\$ 2,476,042	\$ 2,900,330	\$ 2,626,830	\$ 2,705,639		

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual			Projected				Assumed Annual Growth	Calculated Annual Growth		
	1997	1998	Fiscal Year	1999	2000	2001	2002			2003	2004
Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)											
22	GLASS RECYCLING										
23	\$ 30,845	\$ 30,204		\$ 30,084	\$ 30,756	\$ 31,680	\$ 32,630	\$ 33,610	\$ 34,620	3.00%	2.85%
24	11,413	11,175		11,131	11,380	11,722	12,073	12,436	12,809	3.00%	2.85%
25	Current Expenses										
26	1,374,960	1,290,356		1,800,000	1,800,000	1,854,000	1,909,620	1,966,910	2,025,920	3.00%	2.39%
27	-	28,437		100,000	120,000	123,600	127,310	131,130	135,060	3.00%	6.20%
28	\$ 1,374,960	\$ 1,318,793		\$ 1,900,000	\$ 1,920,000	\$ 1,977,600	\$ 2,036,930	\$ 2,098,040	\$ 2,160,980	3.00%	-
29	Equipment										
30	\$ 1,417,218	\$ 1,360,172		\$ 1,941,215	\$ 1,962,136	\$ 2,021,002	\$ 2,081,633	\$ 2,144,086	\$ 2,208,409	3.00%	-
31	HONOLULU COLLECTION										
32	\$ 4,913,679	\$ 5,160,607		\$ 4,168,051	\$ 5,351,952	\$ 5,512,510	\$ 5,677,890	\$ 5,848,230	\$ 6,023,680	3.00%	7.64%
33	1,818,061	1,909,425		1,542,179	1,980,222	2,039,629	2,100,819	2,163,845	2,228,762	3.00%	7.64%
34	276,393	296,083		267,961	400,095	412,100	424,460	437,190	450,310	3.00%	10.94%
35	20,350	80,332		-	-	-	-	-	-	3.00%	-
36	\$ 7,028,483	\$ 7,446,447		\$ 5,978,191	\$ 7,732,269	\$ 7,964,239	\$ 8,203,169	\$ 8,449,265	\$ 8,702,752	3.00%	-
37	RURAL COLLECTION										
38	\$ 5,777,289	\$ 5,694,533		\$ 4,316,912	\$ 5,596,539	\$ 5,764,440	\$ 5,937,370	\$ 6,115,490	\$ 6,298,950	3.00%	7.85%
39	2,137,597	2,106,977		1,597,257	2,070,719	2,132,843	2,196,827	2,262,731	2,330,612	3.00%	7.85%
40	140,955	217,747		166,925	224,445	231,180	238,120	245,260	252,620	3.00%	8.64%
41	72,064	1,384		-	-	-	-	-	-	3.00%	-
42	\$ 8,127,905	\$ 8,020,641		\$ 6,081,094	\$ 7,891,703	\$ 8,128,463	\$ 8,372,317	\$ 8,623,481	\$ 8,882,182	3.00%	-
43	MAINTENANCE/WASTE DIVERSION										
44	\$ 806,492	\$ 880,557		\$ 790,062	\$ 854,516	\$ 880,150	\$ 906,550	\$ 933,750	\$ 961,760	3.00%	4.01%
45	298,402	325,806		292,323	316,171	325,656	335,424	345,488	355,851	3.00%	4.01%
46	72,449	67,076		76,000	72,710	74,890	77,140	79,450	81,830	3.00%	1.49%
47	2,030	3,692		-	21,580	19,845	20,837	21,879	140,391	3.00%	-
48	\$ 1,179,373	\$ 1,277,131		\$ 1,158,385	\$ 1,264,977	\$ 1,300,541	\$ 1,339,951	\$ 1,380,567	\$ 1,539,832	3.00%	-

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

	Actual			Projected				Assumed Annual Growth	Calculated Annual Growth		
	1997	1998	Fiscal Year	1999	2000	2001	2002			2003	2004
49	LANDFILL										
50	\$ 172,032	\$ 92,291	\$	\$ 61,454	\$ 70,484	\$ 72,600	\$ 74,780	\$ 77,020	\$ 79,330	3.00%	5.24%
51	63,652	34,148		22,738	26,079	26,862	27,669	28,497	29,352		5.24%
52	Current Expenses										
53	Contractual Svcs										
54			\$ 6,822,000	\$ 2,679,600	\$ 2,484,600	\$ 2,559,140	\$ 2,635,910	\$ 2,714,990	\$ 2,714,990	3.00%	-16.83%
55			1,165,530	1,596,560	1,506,250	1,551,440	1,597,980	1,645,920	1,645,920	3.00%	7.15%
56			1,570,000	1,524,279	780,045	803,450	827,550	852,380	852,380	3.00%	-11.50%
57			\$ 6,296,413	\$ 5,594,823	\$ 4,770,895	\$ 4,914,030	\$ 5,061,440	\$ 5,213,290	\$ 5,213,290	3.00%	-11.42%
58			140,782	159,121	342,090	352,350	362,920	373,810	373,810		
59			\$ 6,437,195	\$ 5,753,944	\$ 5,112,985	\$ 5,266,380	\$ 5,424,360	\$ 5,587,100	\$ 5,587,100	3.00%	-216.48%
60			196,561	4,601	-	-	-	-	-	3.00%	-9.85%
61			\$ 6,869,440	\$ 5,884,984	\$ 6,229,132	\$ 5,212,447	\$ 5,368,829	\$ 5,529,877	\$ 5,695,782		
62	TRANSFER STATION										
63	\$ 1,939,357	\$ 2,049,459	\$	\$ 1,856,168	\$ 1,937,584	\$ 1,995,710	\$ 2,055,580	\$ 2,117,250	\$ 2,180,770	3.00%	3.28%
64	717,562	758,300		686,782	716,906	738,413	760,565	783,383	806,885		3.28%
65	Current Expenses										
66			\$ 1,937,855	\$ 2,285,735	\$ 2,439,497	\$ 2,512,680	\$ 2,588,060	\$ 2,665,700	\$ 2,745,670	3.00%	1.29%
67			482,731	324,727	683,910	704,430	725,560	747,330	769,750	3.00%	10.90%
68			\$ 2,420,586	\$ 2,610,462	\$ 3,123,407	\$ 3,217,110	\$ 3,313,620	\$ 3,413,030	\$ 3,515,420		
69			196,561	4,601	-	-	-	-	-		
70			\$ 5,274,066	\$ 5,422,822	\$ 5,777,897	\$ 5,951,233	\$ 6,129,765	\$ 6,313,663	\$ 6,503,075		

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual			Projected			Assumed Annual Growth	Calculated Annual Growth			
	Fiscal Year	1997	1998	1999	2000	2001			2002	2003	2004
71	H-POWER										
72	Salaries	\$ 186,621	\$ 194,290	\$ 187,936	\$ 186,936	\$ 192,540	\$ 198,320	\$ 204,270	\$ 210,400	3.00%	2.28%
73	Fringe Benefits	69,050	71,887	69,536	69,166	71,240	73,378	75,580	77,848	3.00%	2.28%
74	Current Expenses										
75	Contractual Svcs	30,051,909	30,327,805	32,000,000	33,000,000	33,990,000	35,009,700	36,059,990	37,141,790	3.00%	3.02%
76	Rental of Bldgs	25,046,940	25,046,940	25,046,940	25,046,940	30,612,926	30,612,926	30,612,926	30,612,926	3.00%	4.10%
77	Refuse Disposal Services	7,865,710	10,330,174	13,200,000	13,094,400	13,487,230	13,891,850	14,308,610	14,737,870	3.00%	2.23%
78	State Disposal Srchg	146,712	219,732	220,500	155,000	159,650	164,440	169,370	174,450	3.00%	-4.58%
79	Recycling Surcharge (City)	770,610	1,035,183	1,183,500	988,032	1,017,670	1,048,200	1,079,650	1,112,040	3.00%	-1.24%
80	Other Current	15,120	9,008	442,655	443,940	457,260	470,980	485,110	499,660	3.00%	2.45%
81	Subtotal - Current Expns	\$ 63,897,001	\$ 66,968,842	\$ 72,093,595	\$ 72,728,312	\$ 79,724,736	\$ 81,198,096	\$ 82,715,656	\$ 84,278,736		
82	Debt Service on GO Bonds	25,831,873	25,806,326	25,781,295	25,763,395	25,732,139	25,705,776	25,676,345	25,641,763		
83	Equipment	6,040	6,170	1,550	1,500	1,550	1,600	1,650	1,700	3.00%	1.86%
84	Subtotal - H-POWER	\$ 89,990,585	\$ 93,047,515	\$ 98,133,912	\$ 98,749,309	\$ 105,722,205	\$ 107,177,170	\$ 108,673,501	\$ 110,210,447		
85											
86	TOTAL COST OF OPERATION										
87	Salaries	14,806,319	15,104,107	12,388,679	15,018,949	15,469,520	15,933,610	16,411,620	16,903,980		6.41%
88	Fringe Benefits			4,583,810	5,557,010	5,723,724	5,895,437	6,072,300	6,254,473		6.41%
89	Current Expense	75,517,527	78,230,227	114,269,793	112,909,556	118,893,310	120,743,412	122,646,711	124,602,859		1.75%
90	Subtotal	\$ 90,323,846	\$ 93,334,334	\$ 131,242,282	\$ 133,485,515	\$ 140,086,554	\$ 142,572,459	\$ 145,130,631	\$ 147,761,312		2.40%
91	Equipment	\$ 313,689	\$ 100,908	1,550	23,080	29,895	374,497	25,649	144,271		
92	TOTAL	\$ 90,637,535	\$ 93,435,242	\$ 131,243,832	\$ 133,508,595	\$ 140,116,449	\$ 142,946,956	\$ 145,156,280	\$ 147,905,583		2.42%

Note: Equipment expenses shown above are assumed to be funded with funding sources shown in Table 5.

TABLE 3
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Number of Customers and Waste Quantities
Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

	Base	Annual Growth	Fiscal Year					
			1999	2000	2001	2002	2003	2004
1 Number of Customer Accounts								
2 Single-Family Household (1)								
3 Honolulu								
4 Automated (Current) (2)	25,384	0.33%	28,770	32,160	35,550	38,940	42,330	45,720
5 Automated (Pending) (3)	19,465	0.00%	16,230	12,990	9,750	6,510	3,270	30
6 Manual	11,887	0.33%	11,930	11,970	12,010	12,050	12,090	12,130
7 Subtotal - Honolulu	56,736	0.33%	56,930	57,120	57,310	57,500	57,690	57,880
8 Rural								
9 Automated (Current) (2)	46,926	0.33%	54,120	61,310	68,500	75,700	82,900	90,100
10 Automated (Pending) (3)	41,702	0.00%	34,800	27,900	21,000	14,100	7,200	300
11 Manual	4,822	0.33%	4,840	4,860	4,880	4,900	4,920	4,940
12 Subtotal - Rural	93,450	0.33%	93,760	94,070	94,380	94,700	95,020	95,340
13 Specialty Routes	5,136	0.33%	5,150	5,170	5,190	5,210	5,230	5,250
14 Subtotal - Single-Family	155,322	0.33%	155,840	156,360	156,880	157,410	157,940	158,470
15 Multifamily Households								
16 Manual	18,008	0.50%	18,100	18,190	18,280	18,370	18,460	18,550
17 Bins - 3 yd	569	1.00%	570	580	590	600	610	620
18 Subtotal - Honolulu Units	18,577	0.53%	18,670	18,770	18,870	18,970	19,070	19,170
19 Non-Profit/Parks								
20 Bins - 3 yd	244	1.00%	246	248	250	253	256	259
21 Other	-	1.00%	-	-	-	-	-	-
22 Subtotal - Non-Profit	244	0.96%	246	248	250	253	256	259
23 Solid Waste Collected (Tons)								
24 Single-Family - Honolulu (5)	-	1.00%	-	-	-	-	-	-
25 Single-Family - Rural (5)	-	1.00%	-	-	-	-	-	-
26 Subtotal - SFH	-	0.00%	-	-	-	-	-	-
27 Multifamily Households	-	1.00%	-	-	-	-	-	-
28 Non-Profit/Parks	-	1.00%	-	-	-	-	-	-
29 Other	-	1.00%	-	-	-	-	-	-
30 Total Waste Collected	298,150	1.00%	301,130	304,140	307,180	310,250	313,350	316,480
31 Solid Waste Transferred (Tons)								
32 Convenience Centers - Others	30,000	1.00%	30,300	30,600	30,910	31,220	31,530	31,850
33 Trans. Stations - Refuse Div.	200,000	1.00%	202,000	204,020	206,060	208,120	210,200	212,300
34 Trans. Stations - Other City/NP	6,300	1.00%	6,360	6,420	6,480	6,540	6,610	6,680
35 Transfer Stations - Comm.	20,000	1.00%	20,200	20,400	20,600	20,810	21,020	21,230
36 Solid Waste Disposal (Tons)								
37 Landfill - Refuse Division	80,330	1.00%	80,300	81,100	81,910	82,730	83,560	84,400
38 Landfill - Commercial	72,000	1.00%	72,000	72,720	73,450	74,180	74,920	75,670
39 Landfill - Other City/Non-Profit	67,000	1.00%	67,670	68,350	69,030	69,720	70,420	71,120
40 H-POWER - Commercial	357,578	0.00%	320,000	320,000	320,000	320,000	320,000	320,000
41 H-POWER - All City	284,322	0.00%	290,000	290,000	290,000	290,000	290,000	290,000
42 Other	-	1.00%	-	-	-	-	-	-
43 Total Disposal	861,230	0.52%	829,970	832,170	834,390	836,630	838,900	841,190
44 Recycled Waste (Tons)								
45 General	17,000	0.00%	17,000	17,000	17,000	17,000	17,000	17,000
46 Glass	10,000	0.00%	10,000	10,000	10,000	10,000	10,000	10,000

TABLE 4
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Billable Waste Quantities and Tipping Revenues
Fiscal Years Ending June 30

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

	Base	Annual Growth	Fiscal Year						
			1999	2000	2001	2002	2003	2004	
Billable Waste Percentages									
1	Collections	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	Convenience Centers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3	Tran. St. - Other City/Non-Prof	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
4	Transfer Stations - Comm.	30.00%	0.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
5	Landfill - Commercial	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
6	Landfill - Other City/Non-Profit	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
7	H-POWER - Commercial	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
8	H-POWER - All City	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
9	Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10									
Billable Waste (Tons)									
12	Collections		-	-	-	-	-	-	-
13	Convenience Centers		-	-	-	-	-	-	-
14	Transfer Stations - Other City/Non-Profit		6,400	6,400	6,500	6,500	6,600	6,700	
15	Transfer Stations - Commercial		6,100	6,100	6,200	6,200	6,300	6,400	
16	Landfill - Commercial		72,000	72,700	73,500	74,200	74,900	75,700	
17	Landfill - Other City/Non-Profit		67,700	68,400	69,000	69,700	70,400	71,100	
18	H-POWER - Commercial		320,000	320,000	320,000	320,000	320,000	320,000	
19	H-POWER - All City		290,000	290,000	290,000	290,000	290,000	290,000	
20	Other		-	-	-	-	-	-	
21									
Billing Rates (\$/Ton)									
23	Collections	\$ -	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Convenience Centers	-	0.00%	-	-	-	-	-	-
25	Trans. Sts. - Other City/Non-Prof		6.00%	-	70.50	77.75	84.75	91.75	97.26
26	Transfer Stations - Comm.		6.00%	92.25	98.75	107.75	117.25	126.25	133.83
27	Landfill - Commercial		6.00%	65.75	72.25	76.75	81.25	86.25	91.43
28	Landfill - Other City/Non-Profit		6.00%	-	15.00	16.00	17.00	19.00	20.14
29	H-POWER - Commercial		6.00%	65.75	72.25	76.75	81.25	86.25	91.43
30	H-POWER - All City		6.00%	34.00	44.00	46.75	48.75	51.75	54.86
31	Other		0.00%	-	-	-	-	-	-
32	Rec. Surch. - Landfill/HPwr		0.00%	3.95	4.34	4.61	4.88	5.18	5.49
33	Rec. - Transfer		0.00%	5.54	5.93	6.47	7.04	7.58	8.03
34									
Tipping Revenues (\$000)									
36	Collections		-	-	-	-	-	-	-
37	Convenience Centers		-	-	-	-	-	-	-
38	Transfer Stations		560	1,050	1,170	1,280	1,400	1,510	
39	Landfill		4,730	6,280	6,750	7,210	7,800	8,350	
40	H-POWER - Commercial		21,040	23,120	24,560	26,000	27,600	29,260	
41	H-POWER - All City		9,860	12,760	13,560	14,140	15,010	15,910	
42	Recycling Surcharge		3,030	3,330	3,550	3,770	4,010	4,260	
43	Other		-	-	-	-	-	-	
44	Total		\$ 39,220	\$ 46,540	\$ 49,590	\$ 52,400	\$ 55,820	\$ 59,290	

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TABLE 5
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Capital Improvement Expenditures, Sources of Funds and Capital Recovery Expense
Fiscal Years Ending June 30
(\$000)

Case 1.9 PRELIMINARY BASE (No Expansion of Automated Collection Routes)

		Fiscal Year					
		1999	2000	2001	2002	2003	2004
1	Projected Capital Expenditures (\$000)						
2	Renewals, Replacements & Additions - Equipment						
3	Refuse Disposal	\$ 1,690	\$ -	\$ 2,348	\$ 2,348	\$ 968	\$ 1,155
4	Refuse Collection						
5	Automated Collection Equip. (New & Repl.)	\$ 3,883	\$ 4,480	\$ 1,200	\$ 3,840	\$ 3,780	\$ 2,911
6	Other Collection Equipment	950	5,117	2,094	688	-	-
7	Subtotal	\$ 4,833	\$ 9,597	\$ 3,294	\$ 4,528	\$ 3,780	\$ 2,911
8	Subtotal - Equipment	\$ 6,523	\$ 9,597	\$ 5,642	\$ 6,876	\$ 4,748	\$ 4,066
9	Renewals, Replacements & Additions - Facilities						
10	Collection Stations	-	-	-	-	-	-
11	Transfer Stations	-	-	-	-	-	-
12	Landfill	-	-	-	-	-	-
13	H-POWER	-	-	-	-	-	-
14	Other Facilities	-	-	-	-	-	-
15	Subtotal - Facilities	\$ 4,000	\$ 6,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
16	Other	-	-	-	-	-	-
17	Total Capital Expenditures	\$ 10,523	\$ 16,097	\$ 8,142	\$ 9,376	\$ 7,248	\$ 6,566
18							
19	Sources of Funds for Capital Expenditures						
20	General Reserves	\$ 10,523	\$ -	\$ -	\$ -	\$ -	\$ -
21	Mid-Term Debt (for Equipment)	-	9,597	5,642	6,876	4,748	4,066
22	Long-Term Debt (for Facilities)	-	6,500	2,500	2,500	2,500	2,500
23	Current Revenues	-	-	-	-	-	-
24	Total Sources of Funds	\$ 10,523	\$ 16,097	\$ 8,142	\$ 9,376	\$ 7,248	\$ 6,566
25							
26	Bond Financing Expense	-	270	137	157	122	110
27	Total Bonds Issued	\$ -	\$ 16,367	\$ 8,279	\$ 9,533	\$ 7,370	\$ 6,676
28	Cumulative Bonds Issued	\$ -	\$ 16,367	\$ 24,646	\$ 34,179	\$ 41,549	\$ 48,225
29							
30	Annual Capital Recovery Requirements						
31	Payment to City for Existing System						
32	Equipment	-	-	-	-	-	-
33	Facilities	-	-	-	-	-	-
34	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	Debt Service on New Mid-Term Debt *	-	-	1,748	2,776	4,028	4,893
36	Debt Service on New Long-Term Debt *	-	-	553	766	979	1,192
37	Subtotal - Debt Service	\$ -	\$ -	\$ 2,301	\$ 3,542	\$ 5,007	\$ 6,085

* Assumes bond financings occur annually at year end.

**CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division**

**Projected Operating Results
Assumptions and General Parameters**

Case 2.4: AUTOMATED COLLECTION EXPANSION

Refuse Division modeled as enterprise fund
 Division pays no capital recovery expense for existing system
 Future capital expenditures funded from debt
 Operating reserves assumed to be provided by existing H-POWER cash balances
 Expansion of 16 automated collection routes

Assumptions

General Inflation	3.00%
General Salary Escalator	3.00%
General Expense Escalator	3.00%

Mid-Term Debt (Equipment)	
Interest Rate	6.00%
Repayment Period (Years)	7

Long-Term Debt (Facilities)	
Interest Rate	5.50%
Repayment Period (Years)	20

Minimum Debt Service Cover	1.00
Bond Financing Expense	1.65%
Interest Earnings Rate	5.00%

CASE (% of Revenues)	2.50%
Fringe Benefits on Labor	37.00%

Customer Growth Rate	
Single-Family Household	1.00%
Multifamily	1.00%
Non-Profits/Parks	1.00%
Waste Stream Growth	1.00%
Recyclable Material Growth	0.00%

Equivalent Single Family Units (# of SFH/ unit)	
Multifamily Manual	0.67
Multifamily 3-yr	4.00
Non-Profit/Parks 3-yr	4.00

Annual Tipping Fee Increase	6.00%
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Min. Annual Rev. Surplus (\$000)	\$ -
Max. Operating Reserve (\$000)	\$ 6,000

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 2.4 AUTOMATED COLLECTION EXPANSION

	Actual				Projected			
	1997	1998	2000	2001	2002	2003	2004	
1 REVENUES								
2 New Residential User Fees	\$ -	\$ -	\$ 38,333,649	\$ 40,224,930	\$ 42,252,362	\$ 43,433,030	\$ 44,471,198	
3 Small Business Collection	527,627	856,854	850,000	850,000	850,000	850,000	850,000	
4 Commercial Disposal	10,820,607	10,590,564	7,330,000	7,920,000	8,490,000	9,200,000	9,860,000	
5 H-POWER Disposal Fees	27,004,753	30,722,092	35,880,000	38,120,000	40,140,000	42,610,000	45,170,000	
6 H-POWER Elec. Sales (Gross)	19,737,971	28,148,134	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000	
7 H-POWER Lease	24,091,343	21,661,333	21,056,377	25,218,320	24,306,510	23,926,340	23,320,860	
8 Methane Recovery	56,459	119,900	80,000	80,000	70,000	70,000	70,000	
9 Sale of Recycled Material	32,618	27,951	31,000	24,000	24,000	26,000	26,000	
10 Sale of Other Material	18,250	11,684	3,180	24,000	24,000	24,000	24,000	
11 Recycling Surcharge	2,542,853	2,863,123	3,330,000	3,550,000	3,770,000	4,010,000	4,260,000	
11a State Glass Appropriation	1,875,000	1,875,000	1,475,000	1,475,000	1,475,000	1,475,000	1,475,000	
12 Other								
13 TOTAL REVENUES	\$ 86,707,481	\$ 96,876,635	\$ 135,265,249	\$ 144,486,250	\$ 148,401,872	\$ 152,624,370	\$ 156,527,058	
14 OPERATING EXPENSES (Excluding Equipment)								
15 Administration	\$ 957,473	\$ 1,002,107	\$ 1,244,089	\$ 1,071,024	\$ 1,103,157	\$ 1,136,251	\$ 1,170,339	
16 Investigation & Inspection	243,914	264,823	253,156	260,753	268,575	276,639	284,946	
17 Recycling	1,049,275	1,116,044	2,403,927	2,476,042	2,550,330	2,626,830	2,705,639	
18 Glass Recycling	1,417,218	1,360,172	1,962,136	2,021,002	2,081,633	2,144,086	2,208,409	
19 Refuse Collection								
20 Honolulu	7,028,483	7,446,447	6,969,042	7,178,119	7,393,458	7,615,264	7,843,721	
21 Rural	8,127,905	8,020,641	6,212,604	6,398,989	6,590,961	6,788,681	6,992,349	
22 Subtotal - Collection	15,156,388	15,467,088	13,181,646	13,577,108	13,984,419	14,403,945	14,836,070	
23 Refuse Disposal								
24 Maint. & Waste Diversion	1,179,373	1,277,131	1,243,397	1,280,696	1,319,114	1,358,688	1,399,441	
25 Landfill	6,869,440	5,884,984	6,229,132	5,212,447	5,368,829	5,529,877	5,695,782	
26 Transfer	5,274,066	5,422,822	5,777,897	5,951,233	6,129,765	6,313,663	6,503,075	
27 H-POWER	89,990,585	93,047,515	98,747,809	105,720,655	107,175,570	108,671,851	110,208,747	
28 Subtotal - Refuse Disp.	103,313,464	105,632,452	111,998,235	118,165,031	119,993,278	121,874,079	123,807,045	
29 TOTAL OP. EXPENSES	\$ 122,137,732	\$ 124,842,686	\$ 131,043,189	\$ 137,570,960	\$ 139,981,392	\$ 142,461,830	\$ 145,012,448	
30								
31 NET OP. REVENUES	\$ (35,430,251)	\$ (27,966,051)	\$ 4,222,060	\$ 6,915,290	\$ 8,420,480	\$ 10,162,540	\$ 11,514,610	

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 2.4 AUTOMATED COLLECTION EXPANSION

	Actual			Projected					
	Fiscal Year	1997	1998	1999	2000	2001	2002	2003	2004
32	NET OP. REVENUES	\$ (35,430,251)	\$ (27,966,051)	\$ (41,522,725)	\$ 4,222,060	\$ 6,915,290	\$ 8,420,480	\$ 10,162,540	\$ 11,514,610
33									
34	OTHER INCOME								
35	Interest Earnings - H-POWER	7,869,544	8,246,908	-	4,546,570	4,546,570	4,546,570	4,546,570	4,546,570
36	Interest Earnings - Other								
37	AMOUNT AVAIL. FOR DEBT SERVICE & OTHER PURPOSES			\$ (41,522,725)	\$ 8,768,630	\$ 11,461,860	\$ 12,967,050	\$ 14,709,110	\$ 16,061,180
38									
39	PROVISION FOR CAPITAL RECOVERY								
40	Existing System								
41	Equipment	3,938,891	-	-	-	-	-	-	-
42	Facilities	5,103,599	-	-	-	-	-	-	-
43	Subtotal	\$ 9,042,490	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	Debt Service on New Debt					2,301,000	3,542,000	5,007,000	6,085,000
45	Subtotal - Cap. Rec.	\$ 9,042,490	\$ -	\$ -	\$ -	\$ 2,301,000	\$ 3,542,000	\$ 5,007,000	\$ 6,085,000
46									
47	PAYMENTS TO OTHER CITY AGENCIES								
48	CASE	\$ -	\$ -	\$ -	\$ 3,381,630	\$ 3,612,160	\$ 3,710,050	\$ 3,815,610	\$ 3,913,180
49	Automotive Services				4,000,000	4,120,000	4,243,600	4,370,900	4,502,000
50	Road Division				180,000	185,400	191,000	196,700	202,600
51	Building Rental				309,000	318,300	327,800	337,600	347,700
52	Billing & Collection				515,000	530,500	546,400	562,800	579,700
53	Corporation Counsel				50,000	51,500	53,000	54,600	56,200
54	GIS Support				103,000	106,100	109,300	112,600	116,000
55	Driver Training				40,000	41,200	42,400	43,700	45,000
56	Department Administrative				50,000	51,500	53,000	54,600	56,200
57	Information Technology				40,000	41,200	42,400	43,700	45,000
58	Fiscal Office Services				100,000	103,000	106,100	109,300	112,600
59	Subtotal	\$ -	\$ -	\$ -	\$ 8,768,630	\$ 9,160,860	\$ 9,425,050	\$ 9,702,110	\$ 9,976,180
60									
61	Less: Current Capital Exp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62	Less: Other Uses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
63	NET SURPLUS REVENUES	\$ (41,522,725)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TABLE 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division

Actual and Projected Operating Statement

Fiscal Years Ending June 30

Case 2.4 AUTOMATED COLLECTION EXPANSION

	Actual			Projected					
	Fiscal Year	1997	1998	1999	2000	2001	2002	2003	2004
64									
65	NUMBER OF EQUIVALENT SINGLE-FAMILY HOUSEHOLDS								
66	Single-Family Households			155,840	156,360	156,880	157,410	157,940	158,470
67	Multifamily (SFH Equivalent)			14,407	14,507	14,608	14,708	14,808	14,909
68	Non-Profit/Parks (SFH Equivalent)			984	992	1,000	1,012	1,024	1,036
69	Total Equivalent Single Family Households			171,231	171,859	172,488	173,130	173,772	174,415
70									
71	AVERAGE USER FEE PER S.F. HOUSEHOLD (\$/Month)			\$ -	\$ 18.59	\$ 19.43	\$ 20.34	\$ 20.83	\$ 21.25
72	Percent Change from Prior Year			0.0%	0.0%	4.6%	4.7%	2.4%	2.0%
73									
74	OPERATING RESERVE FUND								
75	Balance - Beg of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
76	Deposits to Fund			-	-	-	-	-	-
77	Withdrawals from Fund			-	-	-	-	-	-
78	Balance - End of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
79	H-POWER CAPITAL RESERVE								
80	Balance - Beg of Year			\$ 137,195,031	\$ 140,068,678	\$ 140,068,678	\$ 140,068,678	\$ 140,068,678	\$ 140,068,678
81	Deposits to Fund			84,576,655	88,850,506	88,850,506	88,850,506	88,850,506	88,850,506
82	Withdrawals from Fund			81,703,008	112,106,179	112,106,179	112,106,179	112,106,179	112,106,179
83	Balance - End of Year			\$ 140,068,678	\$ 116,813,005	\$ 116,813,005	\$ 116,813,005	\$ 116,813,005	\$ 116,813,005
84	GLASS INCENTIVE FUND								
85	Balance - Beg of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
86	Deposits (Withdrawals)			-	-	-	-	-	-
87	Balance - End of Year			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
88	RECYCLING FUND								
89	Balance - Beg of Year			\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434
90	Deposits (Withdrawals)			-	-	-	-	-	-
91	Balance - End of Year			\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434	\$ 3,923,434
92									
93	OUTSTANDING DEBT (Year End)			\$ -	\$ 16,367,000	\$ 24,646,000	\$ 34,179,000	\$ 41,549,000	\$ 48,225,000
94	DEBT SERVICE COVERAGE			-	-	4.98	3.66	2.94	2.64

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual		Projected				Assumed Annual Growth	Calculated Annual Growth		
	1997	1998	1999	2000	2001	2002			2003	2004
Case 2.4. AUTOMATED COLLECTION EXPANSION										
1 ADMINISTRATION										
2 Salaries	\$ 654,975	\$ 685,579	\$ 647,244	\$ 652,698	\$ 672,280	\$ 692,450	\$ 713,220	\$ 734,620	3.00%	2.56%
3 Fringe Benefits	242,341	253,664	239,480	241,498	248,744	256,207	263,891	271,809	3.00%	2.56%
4 Current Expenses	50,899	60,136	73,741	349,893	150,000	154,500	159,140	163,910	3.00%	17.32%
5 Equipment	9,258	2,728	-	-	2,000	2,060	2,120	2,180	3.00%	-
6 Subtotal - Administration	\$ 957,473	\$ 1,002,107	\$ 960,465	\$ 1,244,089	\$ 1,073,024	\$ 1,105,217	\$ 1,138,371	\$ 1,172,519		
7 INVESTIGATION & INSPECTION										
8 Salaries	\$ 171,496	\$ 188,866	\$ 184,944	\$ 177,756	\$ 183,090	\$ 188,580	\$ 194,240	\$ 200,070	3.00%	1.58%
9 Fringe Benefits	63,454	69,880	68,429	65,770	67,743	69,775	71,869	74,026	3.00%	1.58%
10 Current Expenses	8,964	6,077	9,630	9,630	9,920	10,220	10,530	10,850	3.00%	2.41%
11 Equipment	-	-	-	-	6,500	-	-	-	3.00%	-
12 Subtotal - Invest. & Insp.	\$ 243,914	\$ 264,823	\$ 263,003	\$ 253,156	\$ 267,253	\$ 268,575	\$ 276,639	\$ 284,946		
13 RECYCLING										
14 Salaries	\$ 153,514	\$ 127,721	\$ 145,824	\$ 159,728	\$ 164,520	\$ 169,460	\$ 174,540	\$ 179,780	3.00%	4.28%
15 Fringe Benefits	56,800	47,257	53,955	59,099	60,872	62,700	64,580	66,519	3.00%	4.28%
16 Current Expenses										
17 Contractual Svcs	731,319	815,892	1,352,500	2,010,000	2,070,300	2,132,410	2,196,380	2,262,270	3.00%	10.84%
18 Other Current	106,806	125,174	131,350	175,100	180,350	185,760	191,330	197,070	3.00%	8.45%
19 Subtotal - Current Exp.	\$ 838,125	\$ 941,066	\$ 1,483,850	\$ 2,185,100	\$ 2,250,650	\$ 2,318,170	\$ 2,387,710	\$ 2,459,340		
20 Equipment	836	-	-	-	-	350,000	-	-	3.00%	-
21 Subtotal - Recycling	\$ 1,049,275	\$ 1,116,044	\$ 1,683,629	\$ 2,403,927	\$ 2,476,042	\$ 2,900,330	\$ 2,626,830	\$ 2,705,639		

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual		Projected				Assumed Annual Growth	Calculated Annual Growth		
	1997	1998	1999	2000	2001	2002			2003	2004
49 LANDFILL										
50 Salaries	\$ 172,032	\$ 92,291	\$ 61,454	\$ 70,484	\$ 72,600	\$ 74,780	\$ 77,020	\$ 79,330	3.00%	5.24%
51 Fringe Benefits	63,652	34,148	22,738	26,079	26,862	27,669	28,497	29,352	3.00%	5.24%
52 Current Expenses										
53 Contractual Svcs										
54 Wai. Gulch Disp Fee			\$ 6,822,000	\$ 2,679,600	\$ 2,484,600	\$ 2,559,140	\$ 2,635,910	\$ 2,714,990	3.00%	-16.83%
55 Landfill Liner			1,165,530	1,596,560	1,506,250	1,551,440	1,597,980	1,645,920	3.00%	7.15%
56 Other			1,570,000	1,524,279	780,045	803,450	827,550	852,380	3.00%	-11.50%
57 Subtotal - Cont Svcs	\$ 6,296,413	\$ 5,594,823	\$ 9,557,530	\$ 5,800,439	\$ 4,770,895	\$ 4,914,030	\$ 5,061,440	\$ 5,213,290	3.00%	-11.42%
58 Other Current	140,782	159,121	(174,354)	332,130	342,090	352,350	362,920	373,810	3.00%	-216.48%
59 Subtotal - Current Exp.	\$ 6,437,195	\$ 5,753,944	\$ 9,383,176	\$ 6,132,569	\$ 5,112,985	\$ 5,266,380	\$ 5,424,360	\$ 5,587,100	3.00%	-9.85%
60 Equipment	196,561	4,601	-	-	-	-	-	-	3.00%	-
61 Subtotal - Landfill	\$ 6,869,440	\$ 5,884,984	\$ 9,467,368	\$ 6,229,132	\$ 5,212,447	\$ 5,368,829	\$ 5,529,877	\$ 5,695,782	3.00%	-
62 TRANSFER STATION										
63 Salaries	\$ 1,939,357	\$ 2,049,459	\$ 1,856,168	\$ 1,937,584	\$ 1,995,710	\$ 2,055,580	\$ 2,117,250	\$ 2,180,770	3.00%	3.28%
64 Fringe Benefits	717,562	758,300	686,782	716,906	738,413	760,565	783,383	806,885	3.00%	3.28%
65 Current Expenses										
66 Contractual Svcs	\$ 1,937,855	\$ 2,285,735	\$ 2,574,840	\$ 2,439,497	\$ 2,512,680	\$ 2,588,060	\$ 2,665,700	\$ 2,745,670	3.00%	1.29%
67 Other Current	482,731	324,727	458,780	683,910	704,430	725,560	747,330	769,750	3.00%	10.90%
68 Subtotal - Current Exp.	\$ 2,420,586	\$ 2,610,462	\$ 3,033,620	\$ 3,123,407	\$ 3,217,110	\$ 3,313,620	\$ 3,413,030	\$ 3,515,420	3.00%	-
69 Equipment	196,561	4,601	-	-	-	-	-	-	3.00%	-
70 Subtotal - Transfer St.	\$ 5,274,066	\$ 5,422,822	\$ 5,576,570	\$ 5,777,897	\$ 5,951,233	\$ 6,129,765	\$ 6,313,663	\$ 6,503,075	3.00%	-

Case 2.4 AUTOMATED COLLECTION EXPANSION

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual		Projected					Assumed	Calculated	
	1997	1998	1999	2000	2001	2002	2003	2004	Annual Growth 1999-04	Annual Growth 1999-04
71 H-POWER										
72 Salaries	\$ 186,621	\$ 194,290	\$ 187,936	\$ 186,936	\$ 192,540	\$ 198,320	\$ 204,270	\$ 210,400	3.00%	2.28%
73 Fringe Benefits	69,050	71,887	69,536	69,166	71,240	73,378	75,580	77,848	3.00%	2.28%
74 Current Expenses										
75 Contractual Svcs	30,051,909	30,327,805	32,000,000	33,000,000	33,990,000	35,009,700	36,059,990	37,141,790	3.00%	3.02%
76 Rental of Bldgs	25,046,940	25,046,940	25,046,940	25,046,940	30,612,926	30,612,926	30,612,926	30,612,926	3.00%	4.10%
77 Refuse Disposal Services	7,865,710	10,330,174	13,200,000	13,094,400	13,487,230	13,891,850	14,308,610	14,737,870	3.00%	2.23%
78 State Disposal Srchg	146,712	219,732	220,500	155,000	159,650	164,440	169,370	174,450	3.00%	-4.58%
79 Recycling Surcharge (City)	770,610	1,035,183	1,183,500	988,032	1,017,670	1,048,200	1,079,650	1,112,040	3.00%	-1.24%
80 Other Current	15,120	9,008	442,655	443,940	457,260	470,980	485,110	499,660	3.00%	2.45%
81 Subtotal - Current Expns	\$63,897,001	\$66,968,842	\$72,093,595	\$72,728,312	\$79,724,736	\$81,198,096	\$82,715,656	\$84,278,736		
82 Debt Service on GO Bonds	25,831,873	25,806,326	25,781,295	25,763,395	25,732,139	25,705,776	25,676,345	25,641,763		
83 Equipment	6,040	6,170	1,550	1,500	1,550	1,600	1,650	1,700	3.00%	1.86%
84 Subtotal - H-POWER	\$89,990,585	\$93,047,515	\$98,133,912	\$98,749,309	\$105,722,205	\$107,177,170	\$108,673,501	\$110,210,447		
85										
86 TOTAL COST OF OPERATION										
87 Salaries	14,806,319	15,104,107	12,388,679	13,236,229	13,633,320	14,042,320	14,463,590	14,897,510		3.76%
88 Fringe Benefits			4,583,810	4,897,404	5,044,330	5,195,660	5,351,529	5,512,079		3.76%
89 Current Expense	75,517,527	78,230,227	114,269,793	112,909,556	118,893,310	120,743,412	122,646,711	124,602,859		1.75%
90 Subtotal	\$90,323,846	\$93,334,334	\$131,242,282	\$131,043,189	\$137,570,960	\$139,981,392	\$142,461,830	\$145,012,448		2.02%
91 Equipment	\$ 313,689	\$ 100,908	1,550	23,080	29,895	374,497	25,649	144,271		
92 TOTAL	\$90,637,535	\$93,435,242	\$131,243,832	\$131,066,269	\$137,600,855	\$140,355,889	\$142,487,479	\$145,156,719		2.04%

Note: Equipment expenses shown above are assumed to be funded with funding sources shown in Table 5.

TABLE 3
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Number of Customers and Waste Quantities
Fiscal Years Ending June 30

Case 2.4 AUTOMATED COLLECTION EXPANSION

	Base	Annual Growth	Fiscal Year					
			1999	2000	2001	2002	2003	2004
1 Number of Customer Accounts								
2 Single-Family Household (1)								
3 Honolulu								
4 Automated (Current) (2)	25,384	0.33%	28,770	32,160	35,550	38,940	42,330	45,720
5 Automated (Pending) (3)	19,465	0.00%	16,230	12,990	9,750	6,510	3,270	30
6 Manual	11,887	0.33%	11,930	11,970	12,010	12,050	12,090	12,130
7 Subtotal - Honolulu	56,736	0.33%	56,930	57,120	57,310	57,500	57,690	57,880
8 Rural								
9 Automated (Current) (2)	46,926	0.33%	54,120	61,310	68,500	75,700	82,900	90,100
10 Automated (Pending) (3)	41,702	0.00%	34,800	27,900	21,000	14,100	7,200	300
11 Manual	4,822	0.33%	4,840	4,860	4,880	4,900	4,920	4,940
12 Subtotal - Rural	93,450	0.33%	93,760	94,070	94,380	94,700	95,020	95,340
13 Specialty Routes	5,136	0.33%	5,150	5,170	5,190	5,210	5,230	5,250
14 Subtotal - Single-Family	155,322	0.33%	155,840	156,360	156,880	157,410	157,940	158,470
15 Multifamily Households								
16 Manual	18,008	0.50%	18,100	18,190	18,280	18,370	18,460	18,550
17 Bins - 3 yd	569	1.00%	570	580	590	600	610	620
18 Subtotal - Honolulu Units	18,577	0.53%	18,670	18,770	18,870	18,970	19,070	19,170
19 Non-Profit/Parks								
20 Bins - 3 yd	244	1.00%	246	248	250	253	256	259
21 Other	-	1.00%	-	-	-	-	-	-
22 Subtotal - Non-Profit	244	0.96%	246	248	250	253	256	259
23 Solid Waste Collected (Tons)								
24 Single-Family - Honolulu (5)	-	1.00%	-	-	-	-	-	-
25 Single-Family - Rural (5)	-	1.00%	-	-	-	-	-	-
26 Subtotal - SFH	-	0.00%	-	-	-	-	-	-
27 Multifamily Households	-	1.00%	-	-	-	-	-	-
28 Non-Profit/Parks	-	1.00%	-	-	-	-	-	-
29 Other	-	1.00%	-	-	-	-	-	-
30 Total Waste Collected	298,150	1.00%	301,130	304,140	307,180	310,250	313,350	316,480
31 Solid Waste Transferred (Tons)								
32 Convenience Centers - Others	30,000	1.00%	30,300	30,600	30,910	31,220	31,530	31,850
33 Trans. Stations - Refuse Div.	200,000	1.00%	202,000	204,020	206,060	208,120	210,200	212,300
34 Trans. Stations - Other City/NP	6,300	1.00%	6,360	6,420	6,480	6,540	6,610	6,680
35 Transfer Stations - Comm.	20,000	1.00%	20,200	20,400	20,600	20,810	21,020	21,230
36 Solid Waste Disposal (Tons)								
37 Landfill - Refuse Division	80,330	1.00%	80,300	81,100	81,910	82,730	83,560	84,400
38 Landfill - Commercial	72,000	1.00%	72,000	72,720	73,450	74,180	74,920	75,670
39 Landfill - Other City/Non-Profit	67,000	1.00%	67,670	68,350	69,030	69,720	70,420	71,120
40 H-POWER - Commercial	357,578	0.00%	320,000	320,000	320,000	320,000	320,000	320,000
41 H-POWER - All City	284,322	0.00%	290,000	290,000	290,000	290,000	290,000	290,000
42 Other	-	1.00%	-	-	-	-	-	-
43 Total Disposal	861,230	-0.52%	829,970	832,170	834,390	836,630	838,900	841,190
44 Recycled Waste (Tons)								
45 General	17,000	0.00%	17,000	17,000	17,000	17,000	17,000	17,000
46 Glass	10,000	0.00%	10,000	10,000	10,000	10,000	10,000	10,000

TABLE 4
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Billable Waste Quantities and Tipping Revenues
Fiscal Years Ending June 30

Case 2.4 AUTOMATED COLLECTION EXPANSION

	Base	Annual Growth	Fiscal Year						
			1999	2000	2001	2002	2003	2004	
Billable Waste Percentages									
1	Collections	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	Convenience Centers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3	Tran. St. - Other City/Non-Prof	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
4	Transfer Stations - Comm.	30.00%	0.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
5	Landfill - Commercial	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
6	Landfill - Other City/Non-Profit	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
7	H-POWER - Commercial	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
8	H-POWER - All City	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
9	Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10									
Billable Waste (Tons)									
12	Collections		-	-	-	-	-	-	-
13	Convenience Centers		-	-	-	-	-	-	-
14	Transfer Stations - Other City/Non-Profit		6,400	6,400	6,500	6,500	6,600	6,700	
15	Transfer Stations - Commercial		6,100	6,100	6,200	6,200	6,300	6,400	
16	Landfill - Commercial		72,000	72,700	73,500	74,200	74,900	75,700	
17	Landfill - Other City/Non-Profit		67,700	68,400	69,000	69,700	70,400	71,100	
18	H-POWER - Commercial		320,000	320,000	320,000	320,000	320,000	320,000	
19	H-POWER - All City		290,000	290,000	290,000	290,000	290,000	290,000	
20	Other		-	-	-	-	-	-	
21									
Billing Rates (\$/Ton)									
23	Collections	\$ -	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Convenience Centers	-	0.00%	-	-	-	-	-	-
25	Trans. Sts. - Other City/Non-Prof		6.00%	-	70.50	77.75	84.75	91.75	97.26
26	Transfer Stations - Comm.		6.00%	92.25	98.75	107.75	117.25	126.25	133.83
27	Landfill - Commercial		6.00%	65.75	72.25	76.75	81.25	86.25	91.43
28	Landfill - Other City/Non-Profit		6.00%	-	15.00	16.00	17.00	19.00	20.14
29	H-POWER - Commercial		6.00%	65.75	72.25	76.75	81.25	86.25	91.43
30	H-POWER - All City		6.00%	34.00	44.00	46.75	48.75	51.75	54.86
31	Other		0.00%	-	-	-	-	-	-
32	Rec. Surch. - Landfill/HPwr		0.00%	3.95	4.34	4.61	4.88	5.18	5.49
33	Rec. - Transfer		0.00%	5.54	5.93	6.47	7.04	7.58	8.03
34									
Tipping Revenues (\$000)									
36	Collections		-	-	-	-	-	-	-
37	Convenience Centers		-	-	-	-	-	-	-
38	Transfer Stations		560	1,050	1,170	1,280	1,400	1,510	
39	Landfill		4,730	6,280	6,750	7,210	7,800	8,350	
40	H-POWER - Commercial		21,040	23,120	24,560	26,000	27,600	29,260	
41	H-POWER - All City		9,860	12,760	13,560	14,140	15,010	15,910	
42	Recycling Surcharge		3,030	3,330	3,550	3,770	4,010	4,260	
43	Other		-	-	-	-	-	-	
44	Total		\$ 39,220	\$ 46,540	\$ 49,590	\$ 52,400	\$ 55,820	\$ 59,290	
45									

TABLE 5
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division

Projected Capital Improvement Expenditures, Sources of Funds and Capital Recovery Expense
Fiscal Years Ending June 30
(\$000)

Case 2.4 AUTOMATED COLLECTION EXPANSION

		Fiscal Year					
		1999	2000	2001	2002	2003	2004
1	Projected Capital Expenditures (\$000)						
2	Renewals, Replacements & Additions - Equipment						
3	Refuse Disposal	\$ 1,690	\$ -	\$ 2,348	\$ 2,348	\$ 968	\$ 1,155
4	Refuse Collection						
5	Automated Collection Equip. (New & Repl.)	\$ 3,883	\$ 4,480	\$ 1,200	\$ 3,840	\$ 3,780	\$ 2,911
6	Other Collection Equipment	950	5,117	2,094	688	-	-
7	Subtotal	\$ 4,833	\$ 9,597	\$ 3,294	\$ 4,528	\$ 3,780	\$ 2,911
8	Subtotal - Equipment	\$ 6,523	\$ 9,597	\$ 5,642	\$ 6,876	\$ 4,748	\$ 4,066
9	Renewals, Replacements & Additions - Facilities						
10	Collection Stations	-	-	-	-	-	-
11	Transfer Stations	-	-	-	-	-	-
12	Landfill	-	-	-	-	-	-
13	H-POWER	-	-	-	-	-	-
14	Other Facilities	-	-	-	-	-	-
15	Subtotal - Facilities	\$ 4,000	\$ 6,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
16	Other	-	-	-	-	-	-
17	Total Capital Expenditures	\$ 10,523	\$ 16,097	\$ 8,142	\$ 9,376	\$ 7,248	\$ 6,566
18							
19	Sources of Funds for Capital Expenditures						
20	General Reserves	\$ 10,523	\$ -	\$ -	\$ -	\$ -	\$ -
21	Mid-Term Debt (for Equipment)	-	9,597	5,642	6,876	4,748	4,066
22	Long-Term Debt (for Facilities)	-	6,500	2,500	2,500	2,500	2,500
23	Current Revenues	-	-	-	-	-	-
24	Total Sources of Funds	\$ 10,523	\$ 16,097	\$ 8,142	\$ 9,376	\$ 7,248	\$ 6,566
25							
26	Bond Financing Expense	-	270	137	157	122	110
27	Total Bonds Issued	\$ -	\$ 16,367	\$ 8,279	\$ 9,533	\$ 7,370	\$ 6,676
28	Cumulative Bonds Issued	\$ -	\$ 16,367	\$ 24,646	\$ 34,179	\$ 41,549	\$ 48,225
29							
30	Annual Capital Recovery Requirements						
31	Payment to City for Existing System						
32	Equipment	-	-	-	-	-	-
33	Facilities	-	-	-	-	-	-
34	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	Debt Service on New Mid-Term Debt *	-	-	1,748	2,776	4,028	4,893
36	Debt Service on New Long-Term Debt *	-	-	553	766	979	1,192
37	Subtotal - Debt Service	\$ -	\$ -	\$ 2,301	\$ 3,542	\$ 5,007	\$ 6,085

* Assumes bond financings occur annually at year end.

